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DEC 20 '01

U. S. GEOLOGICAL SURVEY

GRAND CANYON MONITORING & RESEARCH CENTER
2255 NORTH GEMINI DRIVE
FLAGSTAFF, ARIZONA 86001
520-556-7074

DEC 1 4 2001.
MEMORANDUM

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To:

Adaptive Management Work Group

From:

Barry D. Gold

Chief, GCMRC

Subject: Fiscal Year 1997 - 2003 Cumulative Budget Report

Attached is the Grand Canyon Monitoring and Research Center (GCMRC) cumulative budget report that tracks costs for GCMRC scientific activities and administrative and technical support functions. The <u>actual</u> costs are reported for fiscal years 1997 – 2001, whereas the <u>budgeted</u> costs are reported for FY 2002, and the <u>proposed</u> costs are reported for FY 2003.

In fiscal years 1997 – 2000, budgets were developed by program areas: Cultural, Biological, Physical, and Information Technologies. In fiscal year 2001, at the direction of the AMWG Ad Hoc Budget Committee, GCMRC changed to a project cost accounting method of budgeting and tracking costs. Budgets were developed for monitoring and research projects that integrated across the various program areas and included direct costs as well as salary, logistics, and technical support services.

As you review the attached reports, please note the following changes:

- Prior to FY-2001, salary was a line item in the Administration Operations account.
 Beginning FY-2001, salary was distributed to projects. Salary for GIS and survey operations were also distributed to projects as technical support services.
- Prior to FY-2001, logistics were maintained in a Logistics Operations account.
 Beginning FY-2001, logistics were distributed to projects.

GCMRC is requesting appropriated funding to supplement research and monitoring projects in the FY-2003 proposed budget. Projects for which appropriated funding is requested is indicated with a footnote. Greater detail on appropriated funding requests may be obtained from the GCMRC 2003 annual workplan.

Attachment

NOTICE IF		•
CODE NO	entertune ziak	······································

CUMULATIVE BUDGET GRAND CANYON MONITORING & RESEARCH CENTER FY 1997 - FY-2003

ROJECT AREA	FY 1997 Budget	FY 1998 Actual	FY 1999 Actual	FY 2000 Actual	FY 2001 Actual	FY 2002 Budget	FY 2003 Proposed
SCIENTIFIC ACTIVITIES	estec 1900a, le saccepti fou en courci e ever el co unif	and the second s	alletoco Creze II Casorii it aec ellostorii ir a	MEROLOGIMES (FOLLOWNS) AND RESIDENCE (FOR SELECTIVE SECTION)	Walt V James Landers William -	10000000000000000000000000000000000000	i e i i i i i i i i i i i i i i i i i i
A. Terrestrial Ecosystem Activities							and the control of th
Genetics Relatedness Ambersnall: Kanab Ambersnall	127,000	40,000 44,000	44,000	43,000	29,000	46,000	81,000
8 Kanab Ambersnall Taxonomy	100			•	and the second		100,000
Wetland and Riparian Vegetation Avifatina Terrestrial Trophic Linkages	69,000 1 06,000	84,000 70,00 0	80,000 81,000	55,000 81,000 30,000	0 0 48,000	0 0 0	0 0 0
7 Tarrestrial Ecosystem Monitoring (Avi/Terr) 8 Terrestrial Habitat Map & Inventory				112		477,000 222,000	570,000 251,000
10 Mapping Holocene Deposits						105,000	112,000
12 Flow Impact on Cultural Resources		55,000	77,000	0	0	0	0
14 Cultural Monitoring & Mitigation					91,000	9,000	22,000
16 Cultural Data Base Plan					412,003	30,000	0
18 GC Recreation Cultural Activities		14,000		0	0	0	0
9. Reciscition User Prepareties 20. Evaluating Trout Angler's Satisfaction		\$2.400.00g		5,000	0	0	
21 Assessing 20-year Campste Changes 22 Campsite Monitoring Protocols				21,000	0	0	(
24 Cultural Technologies & Outreach		·		15,000	8	0	Ó
B. Aquatic Ecosystem Activities							
2 Aquatic Foodbase	220,000	166,000	178,000	234,000	251,000	336,000	257,000
2 Benede Sydicing	an na sa	/44/48 N	7/1,000				
4 Endangered Fish Research Flows Plan			74,000				-
6 Population Genetics of HBC			0	0	140,000	92,000	7,000 929.00
8 Status & Trends of Lee's Ferry Trout		125,000	133,000	187,000	137,000	154,000	155,000
9 Majiya & Nor Majiya Specias 10 IWQP - Downstream	50,000	163,000	177,000	165,000	54,000	116.000	150,000
MENWOP LEACHFOREIL	30,000	,	,000	283,000	300,000		
C. Integrated Activities 1 Data Integration Report		25,000	902000000000000000000000000000000000000	0.7	0	· * * 0	
Geomorphic Synthesis Geomorphic Hypothesis Testing			119,000 80,000		0 0	0 0	
4 LCR Model Development / Verification 5 Streamflow & Fine Grained Sediment Transpo		30,000 555,000	31,000 529,000 •	14,000 551,000		564,000 511,000	735,00 442,00
6 Fine-Grained Sediment Storage 7 Streamflow & Suspended Sed Trans Model at 8 Compact Sediment Leads Sediment L	386,000	205,000	135,000	28,000	309,000	439,000	231.00
8 Coarse Grained Sediment Inputs, Storage 9 Conceptual Model of Goarse Grained		49,000 ಟಿಕ್ಕೀಟ	20,000 89,700	10,000 98,869	72,000 72,600	126,000 39,000	Standard Section 1
10 Control Network 11 Cirannel Mapping						170,000 33,000	00,68 00,811

	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
PROJECT AREA	Budget	Actual	Actual	Actual	Actual	Budget	Proposed
D. Remote Sensing	The state of the s		(,				a grand Shark to the
Digital Imagery and LIDAR				361,000	0.50	0	0 (2)
2 Remote Sensing Initiative	Contraction of the Contraction o	28, 2 m 1 8 m 22 m 28 m 29 m 29 m 29 m 29 m 29 m	ornores acque alla com agg	200 St. 100 St	472,000	444,000	522,000
E. Other Research Activities							
1 PEP Activites	A A A CONTRACTOR	36,000	33,000	77,000	32,000	0	0
2 Unsolicited Proposals	Service districts of the control of	7,000	0	5,000	18,000	143,000	64,000
AMWG/TWG Requests In-House Research	100	47.000	47.000	No. 1	50,000	76,000	76,000
5 Tribal Outreach	1.4	47,000	47,000 30,000	32,000	13,000 25,000	23,000 74,000	26,000 44,000
6 Low Steady Summer Flows		10.34 . 7.54	30,000	970,000	132,000		44,000
7 Cultural Public Outreach Involvement Plan				0,0,000	102,000		34,000
8 Cultural Synthesis & Data Report	Printer and previous		AND AND SECTION	ar w		and electric states	14,000
II. ADMINISTRATIVE & TECHNICAL SUPPORT SE	ERVICES						
F. Administrative & Management							
Alemania de Particio	354 J 1962,000	14,968,000	1 697 000	(2,076,000)	6837000	(17/3)(10)	755.000
2 Program Planning & Management			17,000	23,000	366,000	346,000	302,000
SECAMP GIGWE PENICOSIKO PENICOSIA SE	51 930 00	3941,0001			486,0003		
4 Independent Review Panels	0	139,000	29,000	19,000	155,000	204,000	212,000
G. Technical Support Services							
Cardialane Information Sangers	256,000	55 000		(0,00)	142 (00)	51 000	
Data Base Management System	70,000	116,000	14,000	13,000	381,000	188,000	113,000
4 Survey Services		16,000	27,000	38,000	206.000	426,000	122,000 (2)
4 Survey Services	0	16,000	27,000	38,000	296,000	126,000	122,000 (2)
6 System Administration	44,000	79,000	131,000	293,000	153,000	250,000	250,000
7. Aeral Phologialiny	5 (000 kg/s		MARTIO (1000)	200,000	1.00,000	200,000	
8 Logistics	537,000	608,000	654,000	727,000	369,000	75,000	0
Total Obligations/Expenditures:	4,672,000	5,947,000	5,286,000	7,114,000	6,510,000	8,107,000	7,877,000

¹ FY-2001 carry-over amount revised after submission of FY-2002 5-yr budget report ² Amount includes requests for appropriations or other outside funding sources

	FY 1997	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003
NDING SOURCES:	Budget	Actual	Actual	Actual	Actual	Budget	Proposed
AMP	4,672,000	5,927,000	5,849,000	6,229,000	6,434,000	6,576,000	6,773,000
Deobligations from previous year obligations	t - Jahren Jago Milliago de Harago J - Ingels and Harago J - Ingels and Harago I - Ingel	· Andrews and the second second	759,000	80,000	***************************************		
Carry-Over from previous year				1,177,000	786,000	1,116,000	nama ay katawa a Pinan i atalah na Pikir na
Transferred from PA for Logistics		85,000	45,000	47,000	75,000	75,000	e e e e e e e e e e e e e e e e e e e
Transferred from PA for Project Work			to an a to a second amount amount		35,000	and the state of the transfer of	
Transferred from BOR IWQP for Lake Powell		······································		283,000	300,000	300,000	300,000
Transferred from BOR for Remote Sensing	management of the second			***************************************	ARE	40,000	
Outside Funding Rquest							30,000
Appropriations Request							774,00
Subtotal Funding Sources	4,672,000	6,012,000	6,653,000	7,816,000	7,630,000	8,107,000	7,877,00
Less: Carry-over to next fiscal year (1)	Mark Sarahkana kara ya marye	62.000	1.177.000	624.000	1,116,000		
Variance with Budget		3,000	190,000	78,000	4,000		
GRAND TOTAL	4,672,000	5,947,000	5,286,000	7,114,000	6,510,000	8,107,000	7,877,000

See endnotes on following page.

End Notes:

- a. In FY-2000, project funds in the amount of \$777k were reprogrammed to support the Low Steady Summer Flows (LSSF) project. The attached detailed project budget reports indicate where project funding was reprogrammed. In addition, \$80k from deobligations and \$113k from carry-over were used for LSSF. Total contribution from GCMRC \$970k.
- b. Beginning FY-2001, at the direction of the AMWG Ad Hoc Budget Committee, GCMRC changed to a project cost accounting method of budgeting and tracking costs. Budgets were no longer developed by Program area (i.e. Biology, Cultural, Physical, etc), but by project. As a result, the following changes occurred with budget development beginning FY-2001:
 - -- Prior to FY-2001, salary was a line item in the Administration Operations account. Beginning FY-2001, salary was distributed to projects. In addition, salary for GIS and survey operations were also distributed to projects.
 - -- Prior to FY-2001, logistics costs were maintained in a Logistics Operations account. Beginning FY-2001, logistics were distributed to projects.
- Beginning with FY-2003, proposed budget includes request for appropriated funds and outside funding. Projects that include appropriations and outside funding are indicated by a footnote (see attached detailed project budgets),

JECT AREA	FY 1997 Budget	FY 1998 Actual	FY 1999 Actual	FY 2000 Actual	FY 2001 Actual	FY 2002 Budget	FY 2003 Proposed
ERRESTRIAL ECOSYSTEM ACTIVITIES							
EMESTALE ESSE OF EMPORTMENT							
A-1. Genetic Relatedness Ambersnail							
Contracts		40,000					
A-2. Kanab Ambersnail							
Salary						11,000	12,00
Contracts	127,000	44,000	44,000	43,000	10,000	10,000	30,00
Logistics					18,000	19,000	33,00
Survey Support					1,000	6,000	6,00
Total Kanab Ambersnail	127,000	44,000	44,000	43,000	29,000	46,000	81,00
A-3. Kanab Ambersnail Taxonomy							
Contracts							100,00
Note: FY03 - outside funding in the amount of \$3	Ok to be requested.						
A-4. Wetland and Riparian Vegetation							
Contracts	69,000	84,000	80,000	55,000			
Total Wetland and Riparian Vegetation	69,000	84,000	80,000	55,000	0	0	
A-5. Avifauna							
Contracts	106,000	70,000	81,000	81,000			
A-6.Terrestrial Trophic Linkages							
Salary	~ ~ ~ ~ ~ ~ ~ ~				2,000		
Contracts				30,000	30,000		
Logistics				•	16,000		
Total Terrestrial Trophic Linkages				30,000	48,000	0	
A-7. Terrestrial Ecosystem Monitoring (Avifau	ına & Tarrastrial\						
Salary	ina a refresence,				3,000	27,000	28,0
Contracts					245,000	261,000	
Logistics Support					128,000	186,000	
GIS Support					•	3,000	4,0
Total Terrestrial Ecosystem Monitoring					376,000	477,000	
A-8. Terrestrial Habitat Map & Inventory						-	
Salary						14,000	51,0
Contracts						200,000	
Logistics						200,000	8,0
GIS						8,000	
Total Terrestrial Habitat Map & Inventory						222,000	
Note: FY03 - appropriated funding In the amount	of \$180k requested	l.					
A-9. New Research - Terrestrial Ecosystems							
Salary							7,0
Contracts Total New Bossesch Terroptial Federates						93,000	
Total New Research - Terrestrial Ecosystems						93,000	7,0
A-10. Mapping Holocene Terraces					·		
						5,000	5,0
Salary							
Contracts						100,000	
•		:				100,000	7,0

ROJECT AREA	FY 1997 Budget	FY 1998 Actual	FY 1999 Actual	FY 2000 Actual	FY 2001 Actual	FY 2002 Budget	FY 2003 Proposed
A-11. Synthesis of Cultural Resource Data Contracts		59,000					
Contracts		39,000					
A-12. Flow Impact on Cultural Resources							
Contracts		55,000	77,000				
A 12 Hani Ethnohotonical							
A-13. Hopi Ethnobotanical Contracts		31,000	60,000				
A-14. Cultural Monitoring & Mitigation							
Salary Contracts					1,000 90,000	9,000	
Logistics					30,000		22,000
Total Cultural Monitoring & Mitigation					91,000	9,000	22,000
A-15. Research Design							
Salary					2,000	9,000	
Contracts					110,000		
Total Research Design					112,000	9,000	(
A-16. Cultural Data Base Plan						· 	
Salary						5,000	
Contracts Total Cultural Data Base Plan & Implementation						25,000	
			· · · · · · · · · · · · · · · · · · ·				
A-17. Cultural Resource Monitoring Plan Salary						6,000	
Contracts						25,000	(
Total Cultural Monitoring Plan & Implementation						31,000	
A-18. GC Recreation Cultural Activities							
Contracts		14,000					
A-19. Recreation User Preferences							
Contracts		70,000					
							
A-20. Evaluating Trout Angler's Satisfaction Contracts				5,000			
Contact					<u></u>		
A-21. Assessing 30-year Campsite Changes Contracts				24.000			
Contracts				24,000) 		
A-22. Campsite Monitoring Protocols							
Contracts				21,000)		
A-23. Photographic Terrace Modeling							
Contracts	······································			35,000)		
A-24. Cultural Technologies & Outreach							
Contracts (NAU Gummerman)				15,000)		
. AQUATIC ECOSYSTEM ACTIVITIES							
B-1. Coordination Act - FWS							
Contracts - BHBF Compliance	150,000)					

JECT AREA	FY 1997 Budget	FY 1998 Actual	FY 1999 Actual	FY 2000 Actual	FY 2001 Actual	FY 2002 Budget	FY 2003 Proposed
B-2. Aquatic Foodbase							
Salary					1,000	32,000	55.000
Contracts	220,000	166,000	178,000	234,000	234.000	235,000	188,000
Supplies and Other Operating Expenses						32,000	
Logistics	000 000	400 000	470.000	224.000	16,000 251,000	37,000	14,000
Total Aquatic Foodbase	220,000	166,000	178,000	234,000	251,000	336,000	257,000
B-3. Backwater Synthesis	- · · · · · · - · - · - ·						
Contracts		44,000					
B-4. Endangered Fish Research Flows Plan							
Contracts (SWCA)			74,000				
B-5. 2d Population HBC Plan							
Contracts (SWCA)			62,000				
B-6. Population Genetics of HBC							
Salary					440.00-	2,000	7,000
Contracts					140,000	90,000	
Logistics Total Population Genetics of HBC			0		140,000	92,000	7,00
Total opinion conclus of the				<u>-</u>	110,000	02,000	1,00
B-7. Status & Trends of Downstream Fish					00.000	07.000	71.00
Salary Contracts	797,000	485,000	520,000	446,000	96,000 397,000	97,000 649,000	71,00 705,00
Supplies and Other Operating Expenses	751,000	403,000	320,000	440,000	28,000	32,000	700,00
Logistics					203,000	152,000	153,000
Total Status & Trends of Downstream Fish	797,000	485,000	520,000	446,000	724,000	930,000	929,00
Note: FY03 - appropriated funding In the amount of \$	120k requested						
B-8. Status & Trends of Lee's Ferry Trout							
Salary					3,000	25,000	15,00
Contracts		125,000	133,000	187,000	91,000	90,000	120,000
Supplies and Other Operating Expenses					28,000	10,000	
Logistics					15,000	29,000	20,00
Total Status & Trends of Lee's Ferry Trout		125,000	133,000	187,000	137,000	154,000	155,00
B-9. Native & Non-Native Species		·					
Salary					3,000	3,000	21,00
Contracts Total Native & Non-Native Species					3,000	141,000 144,000	70,00 91,00
Note: FY03 - appropriated funding In the amount of \$	36k requested.				3,000	177,000	31,00
B-10. IWQP - Downstream							
Salary					42,000	66,000	72,00
					+2,000	30,000	, 2,00
		129,000	158,000	88,000**			
CEQUAL Sample Processing				40,000			
CEQUAL Sample Processing Boat Restoration	50 0 00	34 000	10 000		12 000	20 000	46 00
CEQUAL Sample Processing	50,000	34,000	19,000	37,000	12,000	20,000	
CEQUAL Sample Processing Boat Restoration Supplies and Other Operating Expenses Logistics Total IWQP - Downstream	50,000	34,000 163,000	19,000 177,000		12,000 54,000	20,000 116,000	32,00
CEQUAL Sample Processing Boat Restoration Supplies and Other Operating Expenses Logistics				37,000			32,00
CEQUAL Sample Processing Boat Restoration Supplies and Other Operating Expenses Logistics Total IWQP - Downstream				37,000			32,00

JECT AREA	FY 1997 Budget	FY 1998 Actual	FY 1999 Actual	FY 2000 Actual	FY 2001 Actual	FY 2002 Budget	FY 2003 Proposed
NTEGRATED ACTIVITIES						- -	
C-1. Data Integration Report							
Contracts (SWCA)		25,000					
C-2. Geomorphic Synthesis							
Contracts		100,000	119,000	77,000			
C-3. Geomorphic Hypothesis Testing							
Contracts		80,000	80,000	44,000			
C-4. LCR Model Development / Verification							
Contracts		30,000	31,000	14,000			
C-5. Streamflow and Fine-Sediment Transport							
Salary Contracts	540,000	555.000	529,000	551,000	15,000 373,000	35,000 483,000	37,0 654,0
Supplies and Other Operating Expenses	340,000	000,000	020,000	001,000	58,000		
Logistics Total Streamflow & Fine-Sediment Transport	540,000	555,000	529,000	551,000	43,000 489,000	46,000 564,000	735,0
Note: FY03 - appropriated funding in the amount of			020,000	001,000	100,000	501,000	100,0
C-6. Fine-Grained Sediment Storage							
Salary						16,000	19,0
Contracts •	386,000	205,000	135,000		305,000	382,000	359,
Recreational Beach Survey				28,000	4.000		
Supplies and Other Operating Expenses					1,000 3,000	76,000	52,0
Logistics GIS					3,000	12,000	
Survey						25,000	
Total LT Mon of Fine-Grained Sediment	386,000	205,000	135,000	28,000	309,000	511,000	
* Transferred to LSSF						011,000	1121
* Transferred to LSSF Note: FY03 - appropriated funding In the amount of C-7. Streamflow & Suspended-Sediment Trans II	\$15k requested.						
* Transferred to LSSF Note: FY03 - appropriated funding In the amount of C-7. Streamflow & Suspended-Sediment Trans N Salary	\$15k requested.					16,000	10,
* Transferred to LSSF Note: FY03 - appropriated funding In the amount of C-7. Streamflow & Suspended-Sediment Trans N Salary Contracts	\$15k requested.					16,000 315,000	10, 201,
* Transferred to LSSF Note: FY03 - appropriated funding In the amount of C-7. Streamflow & Suspended-Sediment Trans II Salary Contracts Equipment	\$15k requested.			· · · · · · · · · · · · · · · · · · ·		16,000 315,000 90,000	10, 201,
* Transferred to LSSF Note: FY03 - appropriated funding In the amount of C-7. Streamflow & Suspended-Sediment Trans I Salary Contracts Equipment Logistics	\$15k requested.					16,000 315,000 90,000 8,000	10, 201, 10,
* Transferred to LSSF Note: FY03 - appropriated funding In the amount of C-7. Streamflow & Suspended-Sediment Trans II Salary Contracts Equipment Logistics GIS	\$15k requested.					16,000 315,000 90,000 8,000 2,000	10, 201, 10, 2,
* Transferred to LSSF Note: FY03 - appropriated funding In the amount of C-7. Streamflow & Suspended-Sediment Trans I Salary Contracts Equipment Logistics	\$15k requested.					16,000 315,000 90,000 8,000	10, 201, 10, 2, 8,
* Transferred to LSSF Note: FY03 - appropriated funding In the amount of C-7. Streamflow & Suspended-Sediment Trans II Salary Contracts Equipment Logistics GIS Survey	\$15k requested.					16,000 315,000 90,000 8,000 2,000 8,000	10, 201, 10, 2, 8,
* Transferred to LSSF Note: FY03 - appropriated funding In the amount of C-7. Streamflow & Suspended-Sediment Trans II Salary Contracts Equipment Logistics GIS Survey Total Streamflow & Suspended-Sed Model C-8. Coarse Grained Sediment Inputs Salary	\$15k requested.					16,000 315,000 90,000 8,000 2,000 8,000 439,000	10, 201, 10, 2, 8, 231,
* Transferred to LSSF Note: FY03 - appropriated funding In the amount of C-7. Streamflow & Suspended-Sediment Trans II Salary Contracts Equipment Logistics GIS Survey Total Streamflow & Suspended-Sed Model C-8. Coarse Grained Sediment Inputs Salary Contracts	\$15k requested.				70,000	16,000 315,000 90,000 8,000 2,000 8,000 439,000	10, 201, 10, 2, 8, 231,
* Transferred to LSSF Note: FY03 - appropriated funding In the amount of C-7. Streamflow & Suspended-Sediment Trans II Salary Contracts Equipment Logistics GIS Survey Total Streamflow & Suspended-Sed Model C-8. Coarse Grained Sediment Inputs Salary Contracts Ungaged Tributaries	\$15k requested.	49,000	20,000	10,000		16,000 315,000 90,000 8,000 2,000 8,000 439,000	10, 201, 10, 2, 8, 231,
* Transferred to LSSF Note: FY03 - appropriated funding In the amount of C-7. Streamflow & Suspended-Sediment Trans II Salary Contracts Equipment Logistics GIS Survey Total Streamflow & Suspended-Sed Model C-8. Coarse Grained Sediment Inputs Salary Contracts Ungaged Tributaries GIS	\$15k requested.			10,000		16,000 315,000 90,000 8,000 2,000 8,000 439,000 77,000	10, 201, 10, 2, 8, 231,
* Transferred to LSSF Note: FY03 - appropriated funding In the amount of C-7. Streamflow & Suspended-Sediment Trans II Salary Contracts Equipment Logistics GIS Survey Total Streamflow & Suspended-Sed Model C-8. Coarse Grained Sediment Inputs Salary Contracts Ungaged Tributaries GIS Survey	\$15k requested.			10,000	70,000	16,000 315,000 90,000 8,000 2,000 8,000 439,000 77,000 2,000 4,000	10, 201, 10, 2, 8, 231, 10, 79,
* Transferred to LSSF Note: FY03 - appropriated funding In the amount of C-7. Streamflow & Suspended-Sediment Trans IN Salary Contracts Equipment Logistics GIS Survey Total Streamflow & Suspended-Sed Model C-8. Coarse Grained Sediment Inputs Salary Contracts Ungaged Tributaries GIS Survey Logistics	\$15k requested.	49,000	20,000		70,000	16,000 315,000 90,000 8,000 2,000 8,000 439,000 77,000 2,000 4,000 32,000	10, 201, 10, 2, 8, 231, 10, 79,
* Transferred to LSSF Note: FY03 - appropriated funding In the amount of C-7. Streamflow & Suspended-Sediment Trans IN Salary Contracts Equipment Logistics GIS Survey Total Streamflow & Suspended-Sed Model C-8. Coarse Grained Sediment Inputs Salary Contracts Ungaged Tributaries GIS Survey Logistics Total LT Mon of Coarse Grained Sediment	\$15k requested.			10,000	70,000	16,000 315,000 90,000 8,000 2,000 8,000 439,000 77,000 2,000 4,000	10, 201, 10, 2, 8, 231, 10, 79,
* Transferred to LSSF Note: FY03 - appropriated funding In the amount of C-7. Streamflow & Suspended-Sediment Trans IN Salary Contracts Equipment Logistics GIS Survey Total Streamflow & Suspended-Sed Model C-8. Coarse Grained Sediment Inputs Salary Contracts Ungaged Tributaries GIS Survey Logistics Total LT Mon of Coarse Grained Sediment C-9. Conceptual Model of Coarse Grained	\$15k requested.	49,000	20,000		70,000	16,000 315,000 90,000 8,000 2,000 8,000 439,000 11,000 77,000 2,000 4,000 32,000 126,000	10, 201, 10, 2, 8, 231, 10, 79, 2, 4, 43, 138,
* Transferred to LSSF Note: FY03 - appropriated funding In the amount of C-7. Streamflow & Suspended-Sediment Trans IN Salary Contracts Equipment Logistics GIS Survey Total Streamflow & Suspended-Sed Model C-8. Coarse Grained Sediment Inputs Salary Contracts Ungaged Tributaries GIS Survey Logistics Total LT Mon of Coarse Grained Sediment C-9. Conceptual Model of Coarse Grained Salary	\$15k requested.	49,000	20,000	10,000	70,000 2,000 72,000	16,000 315,000 90,000 8,000 2,000 8,000 439,000 11,000 77,000 2,000 4,000 32,000 126,000	10,0 201,0 10,0 2,0 8,0 231,0 10,0 79,0 4,0 4,0 4,0 138,0
* Transferred to LSSF Note: FY03 - appropriated funding In the amount of C-7. Streamflow & Suspended-Sediment Trans II Salary Contracts Equipment Logistics GIS Survey Total Streamflow & Suspended-Sed Model C-8. Coarse Grained Sediment Inputs Salary Contracts Ungaged Tributaries GIS Survey Logistics Total LT Mon of Coarse Grained Sediment C-9. Conceptual Model of Coarse Grained Salary Contracts	\$15k requested.	49,000	20,000		70,000 2,000 72,000	16,000 315,000 90,000 8,000 2,000 8,000 439,000 11,000 77,000 2,000 4,000 32,000 126,000	10,0 201,0 10,0 2,0 8,0 231,0 10,0 79,0 4,0 43,0 138,0
* Transferred to LSSF Note: FY03 - appropriated funding In the amount of C-7. Streamflow & Suspended-Sediment Trans IN Salary Contracts Equipment Logistics GIS Survey Total Streamflow & Suspended-Sed Model C-8. Coarse Grained Sediment Inputs Salary Contracts Ungaged Tributaries GIS Survey Logistics Total LT Mon of Coarse Grained Sediment C-9. Conceptual Model of Coarse Grained Salary	\$15k requested.	49,000	20,000	10,000	70,000 2,000 72,000	16,000 315,000 90,000 8,000 2,000 8,000 439,000 11,000 77,000 2,000 4,000 32,000 126,000	10,0 201,0 10,0 2,0 8,0 231,0 10,0 79,0 4,0 4,0 4,0 138,0

DJECT AREA BI	/ 1997 udget	FY 1998 Actual	FY 1999 Actual	FY 2000 Actual	FY 2001 Actual	FY 2002 Budget	FY 2003 Propose
		,					
C-10. Control Network							
Survey						37,000	37,0
Logistics						133,000	49,0
Total Control Network						170,000	86,0
C-11. Channel Mapping							
Survey						20,000	36,0
Logistics						13,000	82,0
Total Channel Mapping						33,000	118,0
C-12. Recreational Effects							
Salary							4,(
Contracts							25,0
Logistics							18,0
Total Recreational Effects							47,0
REMOTE SENSING							
D-1. Digital Imagery and LIDAR Contracts				361000**			
Total Digital Imagery and LIDAR				361,000	0	0	
Reprogrammed \$31k for LSSF							
D-2. Remote Sensing Initiative							
Salary					2,000	20,000	
Contracts					465,000	400,000	
						16,000	16,0
GIS					E 000	0.000	
Survey					5,000	8,000	8,
Survey Total Remote Sensing Initiative	equested				5,000 472,000	8,000 444,000	8,6
Survey	equested						8,6
Survey Total Remote Sensing Initiative Note: FY03 - appropriated funding In the amount of \$68k re OTHER SCIENCE ACTIVITIES	equested						8,6
Survey Total Remote Sensing Initiative Note: FY03 - appropriated funding In the amount of \$68k re OTHER SCIENCE ACTIVITIES E-1. PEP Activities	equested		33.00	6000	472,000		8,
Survey Total Remote Sensing Initiative Note: FY03 - appropriated funding In the amount of \$68k re OTHER SCIENCE ACTIVITIES E-1. PEP Activities Physical Resources Program PEP	equested	36,000	33,00		472,000		8,
Survey Total Remote Sensing Initiative Note: FY03 - appropriated funding In the amount of \$68k re OTHER SCIENCE ACTIVITIES E-1. PEP Activities Physical Resources Program PEP Protocol Assessments - Cultural	equested		33,00	41,000	4,000		8,
Survey Total Remote Sensing Initiative Note: FY03 - appropriated funding In the amount of \$68k re OTHER SCIENCE ACTIVITIES E-1. PEP Activities Physical Resources Program PEP Protocol Assessments - Cultural Terrestrial Endangered Species PEP	equested		33,00		4,000	444,000	8,
Survey Total Remote Sensing Initiative Note: FY03 - appropriated funding In the amount of \$68k re OTHER SCIENCE ACTIVITIES E-1. PEP Activities Physical Resources Program PEP Protocol Assessments - Cultural Terrestrial Endangered Species PEP Aquatic Foodbase & Downstream Fish PEP	equested		33,00	41,000 21,000	4,000 4,000 23,000	444,000	8,
Survey Total Remote Sensing Initiative Note: FY03 - appropriated funding In the amount of \$68k re OTHER SCIENCE ACTIVITIES E-1. PEP Activities Physical Resources Program PEP Protocol Assessments - Cultural Terrestrial Endangered Species PEP Aquatic Foodbase & Downstream Fish PEP Status & Trends of Lee's Ferry Trout PEP	equested		33,00	41,000	4,000 4,000 23,000	444,000	8,
Survey Total Remote Sensing Initiative Note: FY03 - appropriated funding In the amount of \$68k re OTHER SCIENCE ACTIVITIES E-1. PEP Activities Physical Resources Program PEP Protocol Assessments - Cultural Terrestrial Endangered Species PEP Aquatic Foodbase & Downstream Fish PEP	equested			41,000 21,000 9,000	4,000 4,000 23,000 5,000	444,000	8,0 522,1
Survey Total Remote Sensing Initiative Note: FY03 - appropriated funding In the amount of \$68k re OTHER SCIENCE ACTIVITIES E-1. PEP Activities Physical Resources Program PEP Protocol Assessments - Cultural Terrestrial Endangered Species PEP Aquatic Foodbase & Downstream Fish PEP Status & Trends of Lee's Ferry Trout PEP IWQP Downstream PEP	equested	36,000		41,000 21,000 9,000	4,000 4,000 23,000 5,000	444,000	8,0 522,1
Survey Total Remote Sensing Initiative Note: FY03 - appropriated funding In the amount of \$68k re OTHER SCIENCE ACTIVITIES E-1. PEP Activities Physical Resources Program PEP Protocol Assessments - Cultural Terrestrial Endangered Species PEP Aquatic Foodbase & Downstream Fish PEP Status & Trends of Lee's Ferry Trout PEP IWQP Downstream PEP Total PEP Activities	equested	36,000		41,000 21,000 9,000	4,000 4,000 23,000 5,000	444,000	8,1
Survey Total Remote Sensing Initiative Note: FY03 - appropriated funding In the amount of \$68k re OTHER SCIENCE ACTIVITIES E-1. PEP Activities Physical Resources Program PEP Protocol Assessments - Cultural Terrestrial Endangered Species PEP Aquatic Foodbase & Downstream Fish PEP Status & Trends of Lee's Ferry Trout PEP IWQP Downstream PEP Total PEP Activities E-2. Unsolicited Proposals	equested	36,000 36,000	33,00	41,000 21,000 9,000	4,000 4,000 23,000 5,000	444,000	8,1
Survey Total Remote Sensing Initiative Note: FY03 - appropriated funding In the amount of \$68k re OTHER SCIENCE ACTIVITIES E-1. PEP Activities Physical Resources Program PEP Protocol Assessments - Cultural Terrestrial Endangered Species PEP Aquatic Foodbase & Downstream Fish PEP Status & Trends of Lee's Ferry Trout PEP IWQP Downstream PEP Total PEP Activities E-2. Unsolicited Proposals Salary	equested	36,000	33,00	41,000 21,000 9,000	4,000 23,000 5,000 32,000	444,000	8,0 522,0
Survey Total Remote Sensing Initiative Note: FY03 - appropriated funding In the amount of \$68k re OTHER SCIENCE ACTIVITIES E-1. PEP Activities Physical Resources Program PEP Protocol Assessments - Cultural Terrestrial Endangered Species PEP Aquatic Foodbase & Downstream Fish PEP Status & Trends of Lee's Ferry Trout PEP IWQP Downstream PEP Total PEP Activities E-2. Unsolicited Proposals Salary Tribal Proposals	equested	36,000 36,000	33,00	41,000 21,000 9,000 0 77,000	4,000 23,000 5,000 32,000	444,000	8,0 522,0 5,0 10,0 49,0
Survey Total Remote Sensing Initiative Note: FY03 - appropriated funding In the amount of \$68k re OTHER SCIENCE ACTIVITIES E-1. PEP Activities Physical Resources Program PEP Protocol Assessments - Cultural Terrestrial Endangered Species PEP Aquatic Foodbase & Downstream Fish PEP Status & Trends of Lee's Ferry Trout PEP IWQP Downstream PEP Total PEP Activities E-2. Unsolicited Proposals Salary Tribal Proposals Adopt-a-Beach	equested	36,000 36,000	33,00	41,000 21,000 9,000 0 77,000	4,000 23,000 5,000 32,000	71,000	8,1 522,1 5,0 10,0 49,0
Survey Total Remote Sensing Initiative Note: FY03 - appropriated funding In the amount of \$68k re OTHER SCIENCE ACTIVITIES E-1. PEP Activities Physical Resources Program PEP Protocol Assessments - Cultural Terrestrial Endangered Species PEP Aquatic Foodbase & Downstream Fish PEP Status & Trends of Lee's Ferry Trout PEP IWQP Downstream PEP Total PEP Activities E-2. Unsolicited Proposals Salary Tribal Proposals Adopt-a-Beach Biology	equested	36,000 7,000	33,00	41,000 21,000 9,000 0 77,000 5,000	4,000 23,000 5,000 32,000	71,000	8,1 522,1 5,0 10,0 49,0
Survey Total Remote Sensing Initiative Note: FY03 - appropriated funding In the amount of \$68k re OTHER SCIENCE ACTIVITIES E-1. PEP Activities Physical Resources Program PEP Protocol Assessments - Cultural Terrestrial Endangered Species PEP Aquatic Foodbase & Downstream Fish PEP Status & Trends of Lee's Ferry Trout PEP IWQP Downstream PEP Total PEP Activities E-2. Unsolicited Proposals Salary Tribal Proposals Adopt-a-Beach Biology Total Unsolicited Proposals ** Reprogrammed \$100k for LSSF E-3. AMWG/TWG Requests	equested	36,000 7,000	33,00	41,000 21,000 9,000 0 77,000 5,000	4,000 23,000 5,000 32,000 18,000	71,000 72,000 143,000	8,0 522,1 5,0 10,0 49,0 64,0
Survey Total Remote Sensing Initiative Note: FY03 - appropriated funding In the amount of \$68k re OTHER SCIENCE ACTIVITIES E-1. PEP Activities Physical Resources Program PEP Protocol Assessments - Cultural Terrestrial Endangered Species PEP Aquatic Foodbase & Downstream Fish PEP Status & Trends of Lee's Ferry Trout PEP IWQP Downstream PEP Total PEP Activities E-2. Unsolicited Proposals Salary Tribal Proposals Adopt-a-Beach Biology Total Unsolicited Proposals ** Reprogrammed \$100k for LSSF E-3. AMWG/TWG Requests Salary	equested	36,000 7,000	33,00	41,000 21,000 9,000 0 77,000 5,000	4,000 23,000 5,000 32,000 18,000	71,000 72,000 143,000	8,0 522,0 5,0 10,0 49,0 64,0 13,0
Survey Total Remote Sensing Initiative Note: FY03 - appropriated funding In the amount of \$68k re OTHER SCIENCE ACTIVITIES E-1. PEP Activities Physical Resources Program PEP Protocol Assessments - Cultural Terrestrial Endangered Species PEP Aquatic Foodbase & Downstream Fish PEP Status & Trends of Lee's Ferry Trout PEP IWQP Downstream PEP Total PEP Activities E-2. Unsolicited Proposals Salary Tribal Proposals Adopt-a-Beach Biology Total Unsolicited Proposals ** Reprogrammed \$100k for LSSF E-3. AMWG/TWG Requests Salary Supplies and Other Operating Expenses	equested	36,000 7,000	33,00	41,000 21,000 9,000 0 77,000 5,000	4,000 23,000 5,000 32,000 18,000 8,000 4,000	71,000 72,000 143,000	8,0 522,1 5,0 10,0 49,0 64,0 13,0
Survey Total Remote Sensing Initiative Note: FY03 - appropriated funding In the amount of \$68k re OTHER SCIENCE ACTIVITIES E-1. PEP Activities Physical Resources Program PEP Protocol Assessments - Cultural Terrestrial Endangered Species PEP Aquatic Foodbase & Downstream Fish PEP Status & Trends of Lee's Ferry Trout PEP IWQP Downstream PEP Total PEP Activities E-2. Unsolicited Proposals Salary Tribal Proposals Adopt-a-Beach Biology Total Unsolicited Proposals ** Reprogrammed \$100k for LSSF E-3. AMWG/TWG Requests Salary	equested	36,000 7,000	33,00	41,000 21,000 9,000 0 77,000 5,000	4,000 23,000 5,000 32,000 18,000	71,000 72,000 143,000 15,000 61,000	8,0 522,0 5,0 10,0 10,0 49,0 64,0 63,0

JECT AREA	FY 1997 Budget	FY 1998 Actual	FY 1999 Actual	FY 2000 Actual	FY 2001 Actual	FY 2002 Budget	FY 2003 Proposed
E-4. In-House Research							
Salary					2,000	3,000	
Bethnic Standing Mass		47,000	47,000				
Student Contracts					11,000		
Projects						20,000	26,00
Total In-House Research		47,000	47,000	**	13,000	23,000	26,00
** Reprogrammed \$55k for LSSF							
E-5. Tribal Outreach							
Salary					12,000	9,000	4,00
Contracts				**		65,000	40,00
Southern Paiute Consortium			30,000	32,000			
Logistics					13,000		
Total Tribal Outreach			30,000	32,000	25,000	74,000	44,00
F-6 Low Steady Summer Flows							
E-6. Low Steady Summer Flows Salary					4.000		
				603,000	4,000 117,000		
Salary		· · · · · · · · · · · · · · · · · · ·	- · · · · · · · · · · · · · · · · · · ·	603,000			
Salary Contracts				603,000 367,000	117,000		
Salary Contracts Symposium Logistics Survey Support	<u> </u>			367,000	117,000 6,000 4,000 1,000		
Salary Contracts Symposium Logistics					117,000 6,000 4,000		
Salary Contracts Symposium Logistics Survey Support Total Low Steady Summer Flows				367,000	117,000 6,000 4,000 1,000		
Salary Contracts Symposium Logistics Survey Support Total Low Steady Summer Flows E-7. Cultural Public Outreach Involvement Plan Salary				367,000	117,000 6,000 4,000 1,000		
Salary Contracts Symposium Logistics Survey Support Total Low Steady Summer Flows E-7. Cultural Public Outreach Involvement Plan Salary Contracts				367,000	117,000 6,000 4,000 1,000		30,0
Salary Contracts Symposium Logistics Survey Support Total Low Steady Summer Flows E-7. Cultural Public Outreach Involvement Plan Salary				367,000	117,000 6,000 4,000 1,000		30,0
Salary Contracts Symposium Logistics Survey Support Total Low Steady Summer Flows E-7. Cultural Public Outreach Involvement Plan Salary Contracts Total Cultural Public Outreach Involvement				367,000	117,000 6,000 4,000 1,000		30,0
Salary Contracts Symposium Logistics Survey Support Total Low Steady Summer Flows E-7. Cultural Public Outreach Involvement Plan Salary Contracts				367,000	117,000 6,000 4,000 1,000		30,0 34,0
Salary Contracts Symposium Logistics Survey Support Total Low Steady Summer Flows E-7. Cultural Public Outreach Involvement Plan Salary Contracts Total Cultural Public Outreach Involvement E-8. Cultural Synthesis & Data Report				367,000	117,000 6,000 4,000 1,000		4,00 30,00 34,00 4,00 10,00 14,00

II. ADMINISTRATIVE TECHNICAL SUPPORT SERVICES BUDGET

CTIONAL AREA	FY 1997 Actual	FY 1998 Actual	FY 1999 Actual	FY 2000 Actual	FY 2001 Actual	FY 2002 Budget	FY 2003 Proposed
DMINISTRATIVE & MANAGEMENT							
F-1. Administrative Operations							
Salary	845,000	1,270,000	1,210.000	1,493,000	264,000	160,000	199,0
Contracts (1)	93,000	140,000	14,000	146,000		50,000	
Space and Faciliites (2)	245,000	147,000	172,000	107,000	102,000	125,000	186,0
Supplies and Operating Expenses	24,000	259,000	167,000	148,000	183,000	181,000	180,0
Regional & FSC Center & Admin Support (3)	245,000	152,000	134,000	182,000	89,000	160,000	190,0
Total Administrative Operations	1,452,000	1,968,000	1,697,000	2,076,000	638,000	676,000	755,0
 FY97 SAS, AZ, Hualapai, NAU, Lescoe; FY98 I Renovation; FY-02 Space Renovation FY-97 Renovation & Relocation; FY-2003 space Costs are based on population, increases due to USGS BRD in FY-2001 	includes costs for	Building 4 Ren	ovation				
F-2. Program Planning & Management							
Salary					354,000	328,000	283,
Travel and Other Operating Expenses			17,000	23,000	12,000	18,000	19,
Total Program Planning & Management			17,000	23,000	366,000	346,000	302,
F-3. AMWG/TWG Participation Salary					30,000	54,000	40.
Travel		11,000	10,000	7,000	6,000	12,000	12,
Total AMWG/TWG Participation		11,000	10,000	7,000	36,000	66,000	52,
Salary GCMRC Program Review (NRC) RFP Reviews	0	139,000	27,000 2,000	19,000	6,000 38,000	10,000 66,000	28, 68,
			2,000	19,000	111,000	97,000	84,
Science Advisor Review Team					111,000	31,000	32,
Other Reviews		120,000	29,000	19,000	155,000	204,000	212
Total Independent Reviews ** Reprogrammed \$100k for LSSF		139,000	29,000	19,000	155,000	204,000	212
TECHNICAL SUPPORT SERVICES							
G-1. Geographic Information Services					101.000	93.000	96
Salary	56 000	55 000			101,000	93,000 58.000	
Salary Contracts	56,000	55,000	5.000	19.000		93,000 58,000	
Salary	56,000 56,000	55,000 55,000	5,000 5,000	19,000	101,000 41,000 142,000		54
Salary Contracts Supplies and Other Operating Expenses					41,000	58,000	54
Salary Contracts Supplies and Other Operating Expenses Total Geographic Informatin Services					41,000	58,000	54 150
Salary Contracts Supplies and Other Operating Expenses Total Geographic Informatin Services G-2. Data Base Management System	56,000	55,000			41,000 142,000	58,000 151,000 73,000	54, 150,
Salary Contracts Supplies and Other Operating Expenses Total Geographic Informatin Services G-2. Data Base Management System Salary			5,000	19,000	41,000 142,000 66,000 293,000	58,000 151,000	54 150
Salary Contracts Supplies and Other Operating Expenses Total Geographic Informatin Services G-2. Data Base Management System Salary Contracts Supplies and Other Operating Expenses	56,000 70,000	55,000 116,000	14,000	19,000	41,000 142,000 66,000 293,000 22,000	73,000 80,000 35,000	54 150 67 10 36
Salary Contracts Supplies and Other Operating Expenses Total Geographic Informatin Services G-2. Data Base Management System Salary Contracts	56,000	55,000	5,000	19,000	41,000 142,000 66,000 293,000	73,000 80,000	54 150 67 10 36
Salary Contracts Supplies and Other Operating Expenses Total Geographic Informatin Services G-2. Data Base Management System Salary Contracts Supplies and Other Operating Expenses Total Data Base Management System	56,000 70,000	55,000 116,000	14,000	19,000	41,000 142,000 66,000 293,000 22,000	73,000 80,000 35,000	54 150 67 10 36 113
Salary Contracts Supplies and Other Operating Expenses Total Geographic Informatin Services G-2. Data Base Management System Salary Contracts Supplies and Other Operating Expenses Total Data Base Management System ** Reprogrammed \$13k for LSSA G-3. Library Salary	56,000 70,000	55,000 116,000	14,000	19,000	41,000 142,000 66,000 293,000 22,000	73,000 80,000 35,000	54 150 67 10 36 113
Salary Contracts Supplies and Other Operating Expenses Total Geographic Informatin Services G-2. Data Base Management System Salary Contracts Supplies and Other Operating Expenses Total Data Base Management System ** Reprogrammed \$13k for LSSA G-3. Library	56,000 70,000	55,000 116,000	14,000	19,000	41,000 142,000 66,000 293,000 22,000 381,000	58,000 151,000 73,000 80,000 35,000 188,000	54, 150, 67, 10, 36, 113, 33, 29,

II. ADMINISTRA - /E TECHNICAL SUPPORT SERVICES BUDGET

NCTION/ L AR-		FY 1997 Actual	FY 1998 Actual	FY 1999 · Actual	FY 2000 Actual	FY 2001 Actual	FY 2002 Budget	FY 2003 Proposed
G-4. Survey O:	→tions							,
Salary						118,000	41,000	41,000
Contracts						,	,	,000
Base Mapping	e Canyon				**			
Supplies and	Operating Expenses		16,000	27,000	38,000	43,000	85,000	81,000
stic						135,000		
rctal \$c. by c	tions	0	16,000	27,000	38,000	296,000	126,000	122,000
** Reprogram	250k for LSSF							
Note: FY03 -	oriations in the amount of \$	45k requested						
G-5. Decision	port System	•						
Contracts								150,000
Note: F / 03	priations in the amount of \$	150k requested				<u> </u>		
G-6. System.	nistration							
Salary						28,000	79,000	78,000
Contracts - Will							60,000	
Са ріta l Ёдре					200,000	76,000	80,000	130,000
Su pplie s and	ting Expenses	44,000	79,000	131,000	93,000	49,000	31,000	42,000
Total System	nistration	44,000	79,000	131,000	293,000	153,000	250,000	250,000
G-7. Aerial P	graphy							
Salary		60,000	177 000	101,000			175,000	
Contracts Total Aerial Phon	raphy	68,000 68,000	177,000 177,000	101,000	**	***	175,000	***
		00,000	177,000	101,000			173,000	
** Repairan	153k for LSSF or Remote Sensing Activities (see Remote Sensing Project)							
	-	•						
G-8. Logistica Salary	····					99,000	122,000	121,000
River Logistics		537,000	525,000	580,000	679,000	867,000	704,000	617,000
Helicopter Sur	,*S	557,000	83,000	34,000	24,000	30,000	35,000	36,000
Wareho: 5	ment Costs		03,000	40,000	24,000	10,000	50,000	31,000
PA Program L	os Cost			+0,000	24,000	73,000	75,000	51,000
Distributed to						-710,000	-911,000	-805,000
Total Logistics	. rojooto	537,000	608,000	654,000	727,000	369,000	75,000	-000,000